

TC 4.5 Program Subcommittee Meeting Minutes

Sunday, January 28, 2001

4:00 – 5:00 p.m.

156 West Concourse
Georgia World Congress Center
Atlanta, Georgia

Attendees[20]:

Gabriela Alvarez/CENIDET	Steve Harrison/Queens Univ.
Dariusz Arasteh/LBNL	Christian Kohler/LBNL
Jeff Baker/WestLAB	Peter Lyons/Australian Window Assoc.
Mahabir Bhandar/Univ. of Massachusetts	Michael McCabe/NIST
Mike Collins/Queens Univ.	Alex McGowan/Levelton Engineering
Dragan Curcija/Univ. of Massachusetts	Bipin Shah/NFRC
François Dubrous/NRCan	David Tait/Tait Solar Company
William duPont/LBNL (Chair)	Samuel Taylor/U.S. Dept. of Energy
Hakim Elmahdy/NRC	John Wright/Univ. of Waterloo
Yogi Goswami/Univ. of Florida	Darryl Yohoda/Univ. of Waterloo

I. Introductions, and Mike Collins agreed to be secretary

II. Atlanta Program, January 27-31, 2001

Symposium AT-01-10: “Characterizing the Performance of Non-Simple Fenestrations: Special Problems in Shaded and Projecting Products”, *Chair: Joe Klems/LBNL* [10/29/01 8:00 a.m. GWCC 360W]

- 1) “The Effects of Cabrimeter Tilt on the Inward-Flowing Fraction of Absorbed Solar Radiation in a Venetian Blind”, *Mike Collins & Steve Harrison/ Queens Univ.*
- 2) “Effect of Tilt Angle and Temperature Difference on the Solar Heat Gain Coefficient of a Fenestration System”, *Tseng Ching-Chia & Yogi Goswami/Univ. of Florida*
- 3) “Test of Measured Solar Heat Gain Variation in a Fenestration and Shade Combination with Respect to Test Specimen Tilt”, *Mike Collins & Steve Harrison/Queen’s Univ.*
- 4) “A Simplified Analysis of Radiant Heat Loss Through Projecting Fenestration Systems”, *John Wright/Univ. of Waterloo*

Deadlines: Technical Papers were due to ASHRAE on April 7, 2000;

TC 4.5 Symposium Papers were due to Symposium Chairs on April 7, 2000;

All reviewed paperwork with TC Chair signature to ASHRAE: August 4, 2000.

III. Cincinnati Program, June 23-27, 2001

[1] Symposium: “Issues in Window Frame Evaluations”, *Anil Parekh/NRCan*

- 1) “3D Conjugate Computational Fluid Dynamics Simulations of Internal Window Frame Cavities Validated Using Infrared Thermography”, *Arild Gustavsen, Brent Griffith, and Dariusz Arasteh/LBNL*
- 2) “Natural Convection Effects in Three-Dimensional Window Frames with Internal Cavities”, *Arild Gustavsen, Brent Griffith, and Dariusz Arasteh/LBNL*
- 3) “Condensation Resistance Simulations”, *Steve Carpenter/Enermodal Engineering, Ltd.*

[2] Forum: “How to Assess the Performance of Tubular Skylights?”, *Hakim Elmahdy/NRC*

[3] Forum: “Condensation Resistance in Commercial Fenestration Systems”, *Dragan Curcija/Univ. of Massachusetts*

NOTE: Numbers in brackets [] indicates priority as voted at TC 4.5 Committee Meeting

**Deadlines: Technical Papers are due to ASHRAE on September 29, 2000;
TC 4.5 Symposium Papers are due to Symposium Chairs on September 29, 2000;
All reviewed paperwork with TC Chair signature to ASHRAE: February 9, 2001.**

Submit 1 copy of packet material to ASHRAE (Mary McGee, Meeting Program Administrator)

NOTE: When submitting paperwork to ASHRAE, be sure to include any special requests, i.e., day of the week you need to present or time (i.e., prefer Sunday or Monday). Please also inform your Section 4.0 Program Liaison of this information.

IV. Atlantic City Program, January 12-16, 2002

Symposium: "Infrared Temperature Measurements and Computer Simulation of Window Assemblies", *Chair: François Dubrous/NRCan*

- 1) "Computer Simulation of Specimens Using FIDAP"
- 2) "Computer Simulation of Specimens Using THERM"
- 3) "Test of Specimens Using Infrared Temperature Measurements"
- 4) "Test of Specimens Using Infrared Temperature Measurements"
- 5) "Summary of Test and Simulation Results"

Symposium: "Approaches to Evaluating Fenestration", *Chair: Dragan Curcija/Univ. of Massachusetts*

- 1) "Comparison of Results from the NFRC Solar Heat Gain Research Project"
- 2) "Testing Solar Heat Gain in Outdoor Calorimeters in Phoenix, Arizona"
- 3) "Detailed Modeling of Sunlit Venetian Blinds"
- 4) "Simplified Methods of Evaluating Shading Attachments"
- 5) "Annual Energy Performance of Skylights"
- 6) "Air Leakage and Condensation Resistance Testing"
- 7) "Simplified Modeling of Cylindrical Skylights"

Symposium: "Improvements in Computer Modeling Fenestration Performance", *Chair: Peter Lyons/Australian Window Assoc.*

- 1) "Three Dimensional Heat Transfer Analysis of Curtain Wall Systems"
- 2) "Variable-h Model for Improved Prediction of Surface Temperature in Fenestration Systems"
- 3) "Use of Detailed Radiation Modeling in Predicting Heat Transfer of Fenestration Systems"
- 4) "Calculation of Condensation Resistance Indices Using Computer Modeling Tools"
- 5) "Results and Lessons of NFRC Round Robin Testing and Simulations"

Seminar: "Issues in Condensation in Commercial Fenestration Systems", *Chair: Jeff Baker/WESTLab*

**Deadlines: Technical Papers are due to ASHRAE on April 2, 2001;
TC 4.5 Symposium Papers are due to Symposium Chairs on April 2, 2001;
All reviewed paperwork with TC Chair signature to ASHRAE: August 3, 2001.**

V. Honolulu Program, June 22-26, 2002

Symposium: "Key Findings of an Extensive Study to Assess Window Condensation Resistance", *Chair: Hakim Elmahdy/NRC*

- 1) "Update of LBNL Research on Condensation Resistance Evaluation", *Christian Kohler & Dariush Arasteh/LBNL*
- 2) "Highlights of US/Canada Study on Condensation Resistance", *François Dubrous/NRCan*
- 3) "Condensation Simulation", *John Wright/Univ. of Waterloo*

Symposium: “Evaluating and Improving Fenestration Frame Performance”, *Chair: Bipin Shah/NFRC*

- 1) “Warm Edge Technology”, *Hakim Elmahdy/NRC*
- 2) “Correlations for Frame Cavity Heat Transfer Using CFD and 2D Tools”, *Christian Kohler, Arild Gustavsen, Brent Griffith, and Dariush Arasteh/LBNL*
- 3) “Solar Heat Gain Coefficient Calculations for Frames Using 2D FEA Tools”, *Christian Kohler/LBNL and Dragan Curcija/Univ. of Massachusetts*

Symposium: “Specifying the Right Windows for Your Job”, *Chair: François Dubrous/NRCan*

Deadlines: Technical Papers are due to ASHRAE on September 28, 2001;

TC 4.5 Symposium Papers are due to Symposium Chairs on September 28, 2001;

All reviewed paperwork with TC Chair signature to ASHRAE: February 8, 2002.

VI. Adjourn

Respectively Submitted: Mike Collins/Queens University at Kingston